



02-18-04

Image

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1762

Attorney Docket No. : Beiersdorf 730

APPELLANT: Telenbuscher et al.

TITLE: Methods of at least partially coating backing materials

EXPRESS MAIL CERTIFICATE

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Date of Deposit February 17, 2004

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NORRIS, McLAUGHLIN & MARCUS, P.A.

By Agata Glinska
Agata Glinska



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FEET TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

 Applicant claims small entity status. See 37 CFR 1.27.

TOTAL AMOUNT OF PAYMENT (\$)

\$330.00

Complete if Known

Application Number	09/902,055
Filing Date	July 10, 2001
First Named Inventor	Klaus Keite-Telgenbuscher
Examiner Name	Katherine A. Bareford
Art Unit	1762
Attorney Docket No.	Beiersdorf 730/ 100718-332

METHOD OF PAYMENT (check all that apply)

 Check Credit card Money Order Other None
 Deposit Account:Deposit Account Number **14-1263**Deposit Account Name **Norris, McLaughlin & Marcus**

The Director is authorized to: (check all that apply)

 Charge fee(s) indicated below Credit any overpayments Charge any additional fee(s) or any underpayment of fee(s) Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity	Small Entity	Fee Description	Fee Paid
Fee Code (\$)	Fee Code (\$)	Fee Description	
1051 130	2051 65	Surcharge - late filing fee or oath	
1052 50	2052 25	Surcharge - late provisional filing fee or cover sheet	
1053 130	1053 130	Non - English specification	
1812 2,520	1812 2,520	For filing a request for ex parte reexamination	
1804 920*	1804 920*	Requesting publication of SIR prior to Examiner action	
1805 1,840*	1805 1,840*	Requesting publication of SIR after Examiner action	
1251 110	2251 55	Extension for reply within first month	
1252 420	2252 210	Extension for reply within second month	
1253 950	2253 475	Extension for reply within third month	
1254 1,480	2254 740	Extension for reply within fourth month	
1255 2,010	2255 1,005	Extension for reply within fifth month	
1401 330	2401 165	Notice of Appeal	
1402 330	2402 165	Filing a brief in support of an appeal	330.00
1403 290	2403 145	Request for oral hearing	
1451 1,510	1451 1,510	Petition to institute a public use proceeding	
1452 110	2452 55	Petition to revive - unavoidable	
1453 1,330	2453 665	Petition to revive - unintentional	
1501 1,330	2501 665	Utility issue fee (or reissue)	
1502 480	2502 240	Design issue fee	
1503 640	2503 320	Plant issue fee	
Total Claims -20** = 0 X 0.00			
Independent Claims - 3** = 0 X 0.00			
Multiple Dependent			

FEE CALCULATION

1. BASIC FILING FEE

Large Entity	Small Entity	Fee Description	Fee Paid
Fee Code (\$)	Fee Code (\$)	Fee Description	
1001 770	2001 385	Utility filing fee	
1002 340	2002 170	Design filing fee	
1003 530	2003 265	Plant filing fee	
1004 770	2004 385	Reissue filing fee	
1005 160	2005 80	Provisional filing fee	
SUBTOTAL (1) (\$)			

2. EXTRA CLAIM FEES FOR UTILITY AND

Extra Claims	Fee from below	Fee Paid
Total Claims -20** = 0 X 0.00		
Independent Claims - 3** = 0 X 0.00		
Multiple Dependent		

Large Entity	Small Entity	Fee Description
Fee Code (\$)	Fee Code (\$)	Fee Description
1202 18	2202 9	Claims in excess of 20
1201 86	2201 43	Independent claims in excess of 3
1203 290	2203 145	Multiple dependent claim, if not paid
1204 86	2204 43	** Reissue independent claims over original patent
1205 18	2205 9	** Reissue claims in excess of 20 and over original patent
SUBTOTAL (2) (\$)		0.00

Fee Code (\$)	Fee Code (\$)	Fee Description	Fee Paid
8021 40	8021 40	Recording each patent assignment per property (times number of properties)	
1809 770	2809 385	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810 770	2810 385	For each additional invention to be examined (37 CFR § 1.129(b))	
1801 770	2801 385	Request for Continued Examination (RCE)	
1802 900	1802 900	Request for expedited examination of a design application	
Other fee (specify)			

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3)

(\$)

\$330.00

**or number previously paid, if greater; For Reissues, see above

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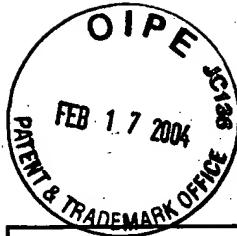
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Name (Print/Type)	Howard C. Lee	Registration No. (Attorney/Agent)	48, 104	Telephone	212-808-0700
Signature	Howard C. Lee		Date	February 17, 2004	

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Beiersdorf 730-WCG
100718-332
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPLICANTS : TELGENBUSCHER et al.
SERIAL NO. : 09/902,055
FILED : 10 July 2001
FOR : METHODS OF AT LEAST PARTIALLY COATING BACKING
MATERIALS
ART UNIT : 1762
EXAMINER : Katherine A. Bareford

17 February 2004

Mail Stop: Appeal Brief - Patents

Hon. Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPELLANTS' BRIEF ON APPEAL PURSUANT TO 37 CFR § 1.192

SIR:

This is an appeal from the final rejection of claims 1 and 3-19, which are the only claims pending in the application.

(1) REAL PARTY IN INTEREST

The real party in interest is **Beiersdorf Aktiengesellschaft** by virtue of an assignment recorded on January 25, 2002 at Reel 012528, Frame 0931.

(2) RELATED APPEALS AND INTERFERENCES

There are no related appeals and interferences.

(3) STATUS OF CLAIMS

Claims 1 and 3-19 stand finally rejected.

(4) STATUS OF AMENDMENTS

All amendments have been entered.

02/23/2004 MAHMED1 00000064 141263 09902055
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(5) SUMMARY OF INVENTION

The present invention relates to a method of applying liquid or pasty substances to a backing material, the substance being applied by means of a die at least partly to the backing material traveling along the die, wherein,

- the die has at least two zones temperature-controlled differently in its cross section and/or along its longitudinal axis;
- the die body is bent transversely to the direction of travel of the backing material and
- the bending is induced by temperature differences within the die body,

which finds support, e.g. in original claims 1 and 2.

Claims 3-19 are supported, e.g., by originally filed claims 3-12.

(6) ISSUES

1. Whether claims 1 and 3-19 are obvious or unobvious when presented with Ludwig (U.S. Patent 5,122,219) in view of Moriarity (U.S. Patent 6,273,701).
2. Whether claims 1, 3-7 and 9-19 are obvious when presented with Bayer et al. (EP 0 622 127 A1) in view of Moriarity (U.S. Patent 6,273,701).

(7) GROUPING OF CLAIMS

Based on the use of Ludwig as the primary reference, it is believed that claims 1, 7, 8 and 11-16 stand or fall together. Claims 3-6, 9, 10 and 17-19 can be treated separately on the merits should the rejection of claim 1 be maintained.

(8) ARGUMENT

Claims 1 and 3-19 are unobvious over Ludwig (U.S. Patent 5,122,219) in view of Moriarity (U.S. Patent 6,273,701).

Characterization of the Ludwig reference

On page 4, lines 4-6 of Paper No. 14 (Final Rejection), the examiner stated that:

"Ludwig teaches all the features of the claims except:

- (1) the transverse bending of the die based on temperature differences in the die body (claim 1);
- (2) the die features (claims 1, 3-6, 9, 10, 19); and
- (3) the specific materials and amounts (claims 15-18)." (10, 17-19?) (reformatted for enhanced readability)

The appellants agree with this characterization but would also add that Ludwig also does not teach a die having "at least two zones temperature-controlled differently" as in appellants claim 1, i.e. when viewing the heating elements of Ludwig's invention as pointed out by the examiner (see col. 3, lines 40-68 and Figure 1), the heating element 10 is either a single unit (characterization most favorable to appellants position) or even if it is argued that element 10 can represent up to three different heating units (characterization most favorable to examiner's position), it is controlled by the same temperature control element 11 and as such does not provide the "at least two zones temperature-controlled differently". Compare and contrast with appellants' invention as presented in Figs. 1 and 2 wherein elements 3 and 4 are two different temperature zones.

Every element of appellants' claim not accounted for by Ludwig in view of Moriarity

MPEP 2143.03 states that "To establish *prima facie* obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art." (see also *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)).

Even if it were permissible to combine Ludwig with Moriarity, the combination of references still lacks the feature of the applicants claim where "...the die body is bent transversely to the direction of travel of the backing material and the bending is induced by temperature differences within the die body."

The examiner stated in her advisory action that:

"Moriarity clearly provides the bending of the die body transversely to the direction of travel as claimed. As shown in figures 2-3 and column 6, lines 25-60, the die body is flexed (i.e. bent) transversely in the direction of travel of the roll in zones across the

elongated portions of the die, which bending is induced by temperature differences within the die body that come from heaters embedded in the body."

However, Morarity makes no such assertion that flexing is equivalent to bending as is being asserted by the examiner and does not indicate that the *die body itself* changes in any way.

Moriarity wishes to increase the rate of polymer flow through their dies and accomplishes this by widening the size of their exit opening 126 by controlling the temperature in the lip 114. Morarity never characterizes this widening as being equivalent to "the die body being bent transversely to the direction of travel of the backing material". Moreover, all of these changes in the exit opening size occur *within* the die 110 itself. There is no teaching or suggestion that the die body is bent transversely. Compare and contrast with appellants' Fig. 3 and 4 (see page 16, lines 10-21 of specification.)

Ludwig teaches away from bending the die body

MPEP 2143.01 states that "[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)." Paraphrasing part of the arguments first presented in the response of 16 January 2003, if Ludwig's die were bent in any way, the planar surface would not be uniform and as such Ludwig would not produce their desired uniform coating, i.e. Ludwig's principle of operation would be changed. Ludwig plainly shows that there is contact between the substrate and the perforated cylinder (die body) and contract pressure roller at the time of coating (see e.g. Figure 1 of Ludwig) whereas Morarity only shows contact between the substrate and the die body at the time of coating (see e.g. Figure 1 of Morarity)

The examiner appeared to reply in her advisory action that because both Ludwig and Morarity intended to provide a means for more uniform coating, one could modify the teaching of Ludwig with Morarity and obtain the desired uniform coating. However, there is no factual support for this assertion. Moreover, the invention of Ludwig did not represent some generic invention open to any means of modification but was in fact an specific improvement upon the prior art (i.e. DE 2,638,307) where the uniformity was achieved by an improvement comprising:

"the coating head having in the region of the outlet a curved contact surface in contact with the inner peripheral surface of the perforated cylinder where in the radius (sic) of curvature of the curved contact surface of the coating head is greater than the radius of curvature of the perforated cylinder such that the perforated cylinder is deformed in the

region of the coating slit around the outlet of the coating head whereby the contact time between the substrate and the perforated cylinder and contact pressure roller is increased." (see claim 1 of Ludwig)

Given this specific set of instructions, the appellants fail to see how the substitution of Moriarity, even if permitted, would serve to allow Ludwig's invention to function as intended.

No factual basis for "it would have been obvious..." assertions

Beginning on page 4, line 16 of Paper No. 14 (Final Rejection), there are listed several "it would have been obvious" assertions by the examiner which included that it would have been obvious to:

- (1) to modify Ludwig to provide a thermal adjustment system
- (2) that the coating fluid provides part of the temperature control of the various zones
- (3) to move the die in its mounts
- (4) that the bending would be controlled proportionate to the amount of the substance applied
- (5) to apply hot-melt pressure sensitive adhesive
- (6) optimize the amounts of material applied passed on the final product.

Obviousness is a factual based inquiry and "[i]n rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden or presenting a *prima facie* case of obviousness. Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant." *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). "In determining whether obviousness is established by combining the teachings of the prior art, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art." *In re GPAC Inc.*, 57 F.3d 1573, 1581, 35 USPQ2d 1116, 1123 (Fed. Cir. 1995).

For the reasons stated above, even if the examiner were given a pass from having to provide a "reason, suggestion, or motivation" to combine the references, the combination of Ludwig and Moriarity would not teach the appellants' invention. However, even if Ludwig and Moriarity had taught what the examiner wanted these references to teach, there is no factual support for the modifications necessary to arrive at the appellants' claimed invention.

Even when the references are directed towards analogous art, "[t]here must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination." *In re Oetiker*, 977 F.2d 1443, 1447, 24 USPQ2d 1443, 1446 (Fed. Cir. 1992). (There is some dispute as to whether Ludwig and Moriarity is really analogous art.

Although both are directed toward a process of coating a substrate, Ludwig and Moriarity not only differ in the nature of the heating elements but also of the position and the role of the counterpressure roller). This requires "evidence that 'a skilled artisan, confronted with the same problems as the inventor and **with no knowledge of the claimed invention**, would select the elements from the cited prior art references in combination in the manner claimed." *Ecolochem, Inc. v. Souther Calif. Edison Co.*, 227 F.3d 1361, 1375, 56 USPQ2d 1065, 1075 (Fed. Cir. 2000) (quoting *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1456 (Fed. Cir. 1998) (emphasis added).

Without the appellants' claims to serve as a template for one of ordinary skill in the art, there is no factual support for the position that it would have been obvious to substitute the heating element of Ludwig with multiple heating elements to effect a bending of the die body transversely to the direction of the travel of the backing material as there is no reason for one of ordinary skill in the art to modify Ludwig's invention beyond the need to match the limitations of the appellants' claim. Even if it were possible to make the substitution, it has previously been held that "[the] mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992), citing *In re Gordon*, 773 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). Neither Ludwig nor Moriarity teach, suggest or render to proper motivation for:

- (1) the desirability of having two temperature zones in the die body and having the die body bent because of differences such temperatures. The simultaneous teaching of both concepts used in tandem is never taught by either Ludwig or Moriarity.
- (2) the coating fluid being part of the temperature control - Moriarity which is presented to support Ludwig actually teaches away from this feature as they require high wattage and low wattage heating elements to control the temperature and regulate the size of the exit openings. Ludwig offers no recognition of a function for the coating fluid beyond being an element which needs to be heated by their heating element 10 and controller 11.
- (3) to move the die in its mounts - the reason proffered by the examiner appears to have been made up by the examiner as there is no suggestion, teaching or motivation to have this modification from the respective specifications of Ludwig or Moriarity.
- (4) that the bending would be controlled proportionate to the amount of the substance applied - there is no evidence of bending the die body from either reference and at best the relationship between proportionality and the amount of substance applied only resides in the teaching of Moriarity which suggests a relationship between the amount of substance and their exit opening, not the die body itself.

- (5) this point can be conceded to the examiner.
- (6) optimize the amounts of material applied passed on the final product - This could be a permissible argument to make but neither Ludwig or Morarity recognizes the amount of material passed is results-effective variable. MPEP 2144.05 section II (Optimization of Ranges) states that "A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977)." If the rejection was really based on inherency, it is the examiner's burden to show that the claimed ranges are necessarily inherent.

It is well known that "[c]ombining prior art references without evidence of such a suggestion, teaching or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability -- the essence of hindsight." *In re Dembicza*k, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) (citations omitted), see also *In re Wesslau*, 353 F.2d 238, 241, 147 USPQ 391, 393 (CCPA 1965)) ("[i]t is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.") Given the facts as presented there is no reason for one of ordinary skill in the art to arrive at the appellants' invention when presented with the Ludwig and Morarity references and without access to the appellants' claims.

Preponderance of the Evidence Standard for Obviousness

In light of the lack of evidence support making the appropriate modifications as presented in arguments made above, the preponderance of evidence suggests that the applicants' invention is unobvious over the prior art. See MPEP 2142:

"...The ultimate determination of patentability is based on the entire record, by a preponderance of evidence, with due consideration to the persuasiveness of any arguments and any secondary evidence. *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). The legal standard of "a preponderance of evidence" requires the evidence to be more convincing than the evidence which is offered in opposition to it.

With regard to the rejections under 35 U.S.C. 103, ***the examiner must provide evidence which as a whole shows that the legal determination sought to be proved (i.e. the reference teachings establish a prima facie case of obviousness) is more probable than not.***

Thus, the standard for holding the appellants' claims to be non-obvious is not that they are non-

obvious "beyond a reasonable doubt" or that they are "clearly and convincingly" non-obvious, merely that it is more likely than not the claims are non-obvious. Given the lack of factual support for the examiner's various positions, the appellants believe that even if the examiner believes there is some basis for her rejection, the appellants' claims when viewed against the combination of Ludwig in view of Moriarity would cause one of ordinary skill in the art to conclude that the appellants' claims are more probable than not non-obvious over the prior art cited.

Claims 1, 3-7 and 9-19 were rejected as being obvious over Bayer et al. (EP 622 127 A1) in view of Moriarity, (U.S. Patent 6,273,701).

In the interest of brevity, the arguments presented above with respect to Ludwig and Moriarity are to be considered repeated here. The appellants argue that this is a duplicative rejection that was unnecessary as Bayer et al. is even further removed from the appellants' invention than Ludwig as there is no recitation of a heating element much less multiple temperature zones as in the appellants' claimed invention.

(9) CONCLUSION

For the foregoing reasons, Appellants respectfully request that the Honorable Board reverse the final rejections.

Beiersdorf 730-WCG
100718-332
6713-Hn/be

CONDITIONAL PETITION FOR EXTENSION OF TIME

If any extension of time for this response is required, Appellants request that this be considered a petition therefor. Please charge the required petition fee to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess to our Deposit Account No. 14-1263.

Respectfully submitted,
NORRIS MC LAUGHLIN & MARCUS, P.A.

By *Howard C. Lee*
Howard C. Lee
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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Hon. Commissioner of Patents P.O. Box 1450
Alexandria, VA 22313-1450, on the date indicated below:

Date: 17 February 2004

By *Agata Glinska*
Agata Glinska

(10) APPENDIX (Claims on Appeal)

1. A method of applying liquid or pasty substances to a backing material, the substance being applied by means of a die at least partly to the backing material traveling along the die, wherein,
 - the die has at least two zones temperature-controlled differently in its cross section and/or along its longitudinal axis;
 - the die body is bent transversely to the direction of travel of the backing material and the bending is induced by temperature differences within the die body.

Claim 2 (cancelled)

3. The method as claimed in claim 1, wherein the die body is temperature-controlled using a heat transfer or cooling fluid, electrical heaters, Peltier elements, radiation or convection.
4. The method as claimed in claim 3, wherein the heat transfer or cooling fluid is itself used for temperature control of at least one of the zones.
5. The method as claimed in claim 1, wherein the die in its mounts may be moved and/or swiveled.
6. The method as claimed in claim 1, wherein the bending occurs substantially perpendicularly to the backing material or substantially in or against the direction of travel of the backing material.
7. The method as claimed in claim 1, wherein the backing material is guided along an adequate apparatus which produces counterpressure.
8. The method as claimed in claim 1, wherein the substance is applied by means of the die through a perforated cylinder onto the backing material.
9. The method as claimed in claim 1, wherein the bending of the die is controlled as a function of the amount of the substance that is applied, determined on the traveling web.
10. The method as claimed in claim 1, wherein the substance at the processing shear has a dynamic zero temperature viscosity of from 0.1 p.a.s to 1000 Pa.s.

11. The method as claimed in claim 1, wherein the substance is a solution, dispersion, prepolymer or thermoplastic polymer.
12. The method as claimed in claim 1, wherein the backing material is a roll or belt having an adhesive surface.
13. The method as claimed in claim 1, wherein said adhesive surface comprises a coating of silicone or fluorine compounds or plasma-coated release systems.
14. The method of claim 1, wherein said substances are thermoplastics.
15. The method of claim 7, wherein said apparatus which produces counterpressure is a roll.
16. The method of claim 11, wherein said solution, dispersion, prepolymer or thermoplastic polymer is a hot-melt pressure-sensitive adhesive.
17. The method of claim 1, wherein said coating is applied at a weight per unit area of from 0.001 g/m² to 3000 g/m².
18. The method of claim 1, wherein said coating is applied at a weight per unit area of from 100 g/m² to 2,000 g/m².
19. The method as claimed in claim 1, wherein the substance at the processing shear has a dynamic zero temperature viscosity of from 1 Pa.s to 500 Pa.s.



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Claims 1 and 3-19 stand finally rejected.

(4) STATUS OF AMENDMENTS

All amendments have been entered.

(5) SUMMARY OF INVENTION

The present invention relates to a method of applying liquid or pasty substances to a backing material, the substance being applied by means of a die at least partly to the backing material traveling along the die, wherein,

- the die has at least two zones temperature-controlled differently in its cross section and/or along its longitudinal axis;
- the die body is bent traversely to the direction of travel of the backing material and
- the bending is induced by temperature differences within the die body,

which finds support, e.g. in original claims 1 and 2.

Claims 3-19 are supported, e.g., by originally filed claims 3-12.

(6) ISSUES

1. Whether claims 1 and 3-19 are obvious or unobvious when presented with Ludwig (U.S. Patent 5,122,219) in view of Morarity (U.S. Patent 6,273,701).
2. Whether claims 1, 3-7 and 9-19 are obvious when presented with Bayer et al. (EP 0 622 127 A1) in view of Morarity (U.S. Patent 6,273,701).

(7) GROUPING OF CLAIMS

Based on the use of Ludwig as the primary reference, it is believed that claims 1, 7, 8 and 11-16 stand or fall together. Claims 3-6, 9, 10 and 17-19 can be treated separately on the merits should the rejection of claim 1 be maintained.

(8) ARGUMENT

Claims 1 and 3-19 are unobvious over Ludwig (U.S. Patent 5,122,219) in view of Moriarity (U.S. Patent 6,273,701).

Characterization of the Ludwig reference

On page 4, lines 4-6 of Paper No. 14 (Final Rejection), the examiner stated that:

"Ludwig teaches all the features of the claims except:

- (1) the transverse bending of the die based on temperature differences in the die body (claim 1);
- (2) the die features (claims 1, 3-6, 9, 10, 19); and
- (3) the specific materials and amounts (claims 15-18)." (10, 17-19?) (reformatted for enhanced readability)

The appellants agree with this characterization but would also add that Ludwig also does not teach a die having "at least two zones temperature-controlled differently" as in appellants claim 1, i.e. when viewing the heating elements of Ludwig's invention as pointed out by the examiner (see col. 3, lines 40-68 and Figure 1), the heating element 10 is either a single unit (characterization most favorable to appellants position) or even if it is argued that element 10 can represent up to three different heating units (characterization most favorable to examiner's position), it is controlled by the same temperature control element 11 and as such does not provide the "at least two zones temperature-controlled differently". Compare and contrast with appellants' invention as presented in Figs. 1 and 2 wherein elements 3 and 4 are two different temperature zones.

Every element of appellants' claim not accounted for by Ludwig in view of Moriarity

MPEP 2143.03 states that "To establish *prima facie* obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art." (see also *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)).

Even if it were permissible to combine Ludwig with Moriarity, the combination of references still lacks the feature of the applicants claim where "...the die body is bent transversely to the direction of travel of the backing material and the bending is induced by temperature differences within the die body."

The examiner stated in her advisory action that:

"Moriarity clearly provides the bending of the die body transversely to the direction of travel as claimed. As shown in figures 2-3 and column 6, lines 25-60, the die body is flexed (i.e. bent) transversely in the direction of travel of the roll in zones across the

elongated portions of the die, which bending is induced by temperature differences within the die body that come from heaters embedded in the body."

However, Morarity makes no such assertion that flexing is equivalent to bending as is being asserted by the examiner and does not indicate that the *die body itself* changes in any way.

Moriarity wishes to increase to rate of polymer flow through their dies and accomplishes this by widening the size of their exit opening 126 by controlling the temperature in the lip 114. Morarity never characterizes this widening as being equivalent to "the die body being bent transversely to the direction of travel of the backing material". Moreover, all of these changes in the exit opening size occur *within* the die 110 itself. There is no teaching or suggestion that the die body is bent transversely. Compare and contrast with appellants' Fig. 3 and 4 (see page 16, lines 10-21 of specification.)

Ludwig teaches away from bending the die body

MPEP 2143.01 states that "[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)." Paraphrasing part of the arguments first presented in the response of 16 January 2003, if Ludwig's die were bent in any way, the planar surface would not be uniform and as such Ludwig would not produce their desired uniform coating, i.e. Ludwig's principle of operation would be changed. Ludwig plainly shows that there is contact between the substrate and the perforated cylinder (die body) and contract pressure roller at the time of coating (see e.g. Figure 1 of Ludwig) whereas Morarity only shows contact between the substrate and the die body at the time of coating (see e.g. Figure 1 of Morarity)

The examiner appeared to reply in her advisory action that because both Ludwig and Morarity intended to provide a means for more uniform coating, one could modify the teaching of Ludwig with Morarity and obtain the desired uniform coating. However, there is no factual support for this assertion. Moreover, the invention of Ludwig did not represent some generic invention open to any means of modification but was in fact an specific improvement upon the prior art (i.e. DE 2,638,307) where the uniformity was achieved by an improvement comprising:

"the coating head having in the region of the outlet a curved contact surface in contact with the inner peripheral surface of the perforated cylinder where in the radium (sic) of curvature of the curved contact surface of the coating head is greater than the radius of curvature of the perforated cylinder such that the perforated cylinder is deformed in the

region of the coating slit around the outlet of the coating head whereby the contact time between the substrate and the perforated cylinder and contact pressure roller is increased." (see claim 1 of Ludwig)

Given this specific set of instructions, the appellants fail to see how the substitution of Moriarity, even if permitted, would serve to allow Ludwig's invention to function as intended.

No factual basis for "it would have been obvious..." assertions

Beginning on page 4, line 16 of Paper No. 14 (Final Rejection), there are listed several "it would have been obvious" assertions by the examiner which included that it would have been obvious to:

- (1) to modify Ludwig to provide a thermal adjustment system
- (2) that the coating fluid provides part of the temperature control of the various zones
- (3) to move the die in its mounts
- (4) that the bending would be controlled proportionate to the amount of the substance applied
- (5) to apply hot-melt pressure sensitive adhesive
- (6) optimize the amounts of material applied passed on the final product.

Obviousness is a factual based inquiry and "[i]n rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden or presenting a *prima facie* case of obviousness. Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant." *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). "In determining whether obviousness is established by combining the teachings of the prior art, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art." *In re GPAC Inc.*, 57 F.3d 1573, 1581, 35 USPQ2d 1116, 1123 (Fed. Cir. 1995).

For the reasons stated above, even if the examiner were given a pass from having to provide a "reason, suggestion, or motivation" to combine the references, the combination of Ludwig and Moriarity would not teach the appellants' invention. However, even if Ludwig and Moriarity had taught what the examiner wanted these references to teach, there is no factual support for the modifications necessary to arrive at the appellants' claimed invention.

Even when the references are directed towards analogous art, "[t]here must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination." *In re Oetiker*, 977 F.2d 1443, 1447, 24 USPQ2d 1443, 1446 (Fed. Cir. 1992). (There is some dispute as to whether Ludwig and Moriarity is really analogous art.

Although both are directed toward a process of coating a substrate, Ludwig and Moriarity not only differ in the nature of the heating elements but also of the position and the role of the counterpressure roller). This requires "evidence that 'a **skilled artisan**, confronted with the same problems as the inventor and **with no knowledge of the claimed invention**, would select the elements from the cited prior art references in combination in the manner claimed." *Ecolochem, Inc. v. Souther Calif. Edison Co.*, 227 F.3d 1361, 1375, 56 USPQ2d 1065, 1075 (Fed. Cir. 2000) (quoting *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1456 (Fed. Cir. 1998) (emphasis added).

Without the appellants' claims to serve as a template for one of ordinary skill in the art, there is no factual support for the position that it would have been obvious to substitute the heating element of Ludwig with multiple heating elements to effect a bending of the die body transversely to the direction of the travel of the backing material as there is no reason for one of ordinary skill in the art to modify Ludwig's invention beyond the need to match the limitations of the appellants' claim. Even if it were possible to make the substitution, it has previously been held that "[the] mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992), citing *In re Gordon*, 773 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

Neither Ludwig nor Moriarity teach, suggest or render to proper motivation for:

- (1) the desirability of having two temperature zones in the die body and having the die body bent because of differences such temperatures. The simultaneous teaching of both concepts used in tandem is never taught by either Ludwig or Moriarity.
- (2) the coating fluid being part of the temperature control - Moriarity which is presented to support Ludwig actually teaches away from this feature as they require high wattage and low wattage heating elements to control the temperature and regulate the size of the exit openings. Ludwig offers no recognition of a function for the coating fluid beyond being an element which needs to be heated by their heating element 10 and controller 11.
- (3) to move the die in its mounts - the reason proffered by the examiner appears to have been made up by the examiner as there is no suggestion, teaching or motivation to have this modification from the respective specifications of Ludwig or Moriarity.
- (4) that the bending would be controlled proportionate to the amount of the substance applied - there is no evidence of bending the die body from either reference and at best the relationship between proportionality and the amount of substance applied only resides in the teaching of Moriarity which suggests a relationship between the amount of substance and their exit opening, not the die body itself.

- (5) this point can be conceded to the examiner.
- (6) optimize the amounts of material applied passed on the final product - This could be a permissible argument to make but neither Ludwig or Moriarity recognizes the amount of material passed is results-effective variable. MPEP 2144.05 section II (Optimization of Ranges) states that "A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977)." If the rejection was really based on inherency, it is the examiner's burden to show that the claimed ranges are necessarily inherent.

It is well known that "[c]ombining prior art references without evidence of such a suggestion, teaching or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability -- the essence of hindsight." *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) (citations omitted), see also *In re Wesslau*, 353 F.2d 238, 241, 147 USPQ 391, 393 (CCPA 1965)) ("[i]t is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.") Given the facts as presented there is no reason for one of ordinary skill in the art to arrive at the appellants' invention when presented with the Ludwig and Moriarity references and without access to the appellants' claims.

Preponderance of the Evidence Standard for Obviousness

In light of the lack of evidence support making the appropriate modifications as presented in arguments made above, the preponderance of evidence suggests that the applicants' invention is unobvious over the prior art. See MPEP 2142:

"...The ultimate determination of patentability is based on the entire record, by a preponderance of evidence, with due consideration to the persuasiveness of any arguments and any secondary evidence. *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). The legal standard of "a preponderance of evidence" requires the evidence to be more convincing than the evidence which is offered in opposition to it.

With regard to the rejections under 35 U.S.C. 103, ***the examiner must provide evidence which as a whole shows that the legal determination sought to be proved (i.e. the reference teachings establish a *prima facie* case of obviousness) is more probable than not.***

Thus, the standard for holding the appellants' claims to be non-obvious is not that they are non-

obvious "beyond a reasonable doubt" or that they are "clearly and convincingly" non-obvious, merely that it is more likely than not the claims are non-obvious. Given the lack of factual support for the examiner's various positions, the appellants believe that even if the examiner believes there is some basis for her rejection, the appellants' claims when viewed against the combination of Ludwig in view of Moriarity would cause one of ordinary skill in the art to conclude that the appellants' claims are more probable than not non-obvious over the prior art cited.

Claims 1, 3-7 and 9-19 were rejected as being obvious over Bayer et al. (EP 622 127 A1) in view of Moriarity, (U.S. Patent 6,273,701).

In the interest of brevity, the arguments presented above with respect to Ludwig and Moriarity are to be considered repeated here. The appellants argue that this is a duplicative rejection that was unnecessary as Bayer et al. is even further removed from the appellants' invention than Ludwig as there is no recitation of a heating element much less multiple temperature zones as in the appellants' claimed invention.

(9) CONCLUSION

For the foregoing reasons, Appellants respectfully request that the Honorable Board reverse the final rejections.

Beiersdorf 730-WCG
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6713-Hn/be

CONDITIONAL PETITION FOR EXTENSION OF TIME

If any extension of time for this response is required, Appellants request that this be considered a petition therefor. Please charge the required petition fee to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess to our Deposit Account No. 14-1263.

Respectfully submitted,
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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first ^{Express} class mail in an envelope addressed to: Hon. Commissioner of Patents P.O. Box 1450 Alexandria, VA 22313-1450, on the date indicated below:

Date: 17 February 2004

By *Agata Glinska*
Agata Glinska

(10) APPENDIX (Claims on Appeal)

1. A method of applying liquid or pasty substances to a backing material, the substance being applied by means of a die at least partly to the backing material traveling along the die, wherein,
 - the die has at least two zones temperature-controlled differently in its cross section and/or along its longitudinal axis;
 - the die body is bent transversely to the direction of travel of the backing material and
 - the bending is induced by temperature differences within the die body.

Claim 2 (cancelled)

3. The method as claimed in claim 1, wherein the die body is temperature-controlled using a heat transfer or cooling fluid, electrical heaters, Peltier elements, radiation or convection.
4. The method as claimed in claim 3, wherein the heat transfer or cooling fluid is itself used for temperature control of at least one of the zones.
5. The method as claimed in claim 1, wherein the die in its mounts may be moved and/or swiveled.
6. The method as claimed in claim 1, wherein the bending occurs substantially perpendicularly to the backing material or substantially in or against the direction of travel of the backing material.
7. The method as claimed in claim 1, wherein the backing material is guided along an adequate apparatus which produces counterpressure.
8. The method as claimed in claim 1, wherein the substance is applied by means of the die through a perforated cylinder onto the backing material.
9. The method as claimed in claim 1, wherein the bending of the die is controlled as a function of the amount of the substance that is applied, determined on the traveling web.
10. The method as claimed in claim 1, wherein the substance at the processing shear has a dynamic zero temperature viscosity of from 0.1 Pa.s to 1000 Pa.s.

11. The method as claimed in claim 1, wherein the substance is a solution, dispersion, prepolymer or thermoplastic polymer.
12. The method as claimed in claim 1, wherein the backing material is a roll or belt having an adhesive surface.
13. The method as claimed in claim 1, wherein said adhesive surface comprises a coating of silicone or fluorine compounds or plasma-coated release systems.
14. The method of claim 1, wherein said substances are thermoplastics.
15. The method of claim 7, wherein said apparatus which produces counterpressure is a roll.
16. The method of claim 11, wherein said solution, dispersion, prepolymer or thermoplastic polymer is a hot-melt pressure-sensitive adhesive.
17. The method of claim 1, wherein said coating is applied at a weight per unit area of from 0.001 g/m² to 3000 g/m².
18. The method of claim 1, wherein said coating is applied at a weight per unit area of from 100 g/m² to 2,000 g/m².
19. The method as claimed in claim 1, wherein the substance at the processing shear has a dynamic zero temperature viscosity of from 1 Pa.s to 500 Pa.s.